SEQUENCE LISTING

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<120>   METHODS FOR INDUCING ANALGESIA

<130>   9233.8DV2

<140>   09/430,735
<141>   1999-10-29

<150>   09/134,803
<151>   1998-08-14

<160>   52

<170>   PatentIn version 3.0

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<212>   PRT
<213>   synthetic construct

<220>
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<222>   (6)..(6)
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<400>   1

Tyr Gly Gly Phe Met Lys
1   5

<210>   2
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<212>   PRT
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<220>
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<223>   Polymer connected to alpha-amino group

<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   Polymer connected to epsilon-amino group

<400>   2

Tyr Gly Gly Phe Met Lys
1   5

<210>   3

1

<211> 6
<212> PRT
<213> synthetic construct

<220>
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<223> Polymer connected to alpha-amino group

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1   5

<210> 4
<211> 6
<212> PRT
<213> synthetic construct

<220>
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<222> (1)..(1)
<223> ACETYLATION

<220>
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<223> AMIDATION

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Phe Arg Trp Trp Tyr Lys
1   5

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<223> AMIDATION

<400> 5

Arg Trp Ile Gly Trp Lys
1   5

<210> 6
<211> 6

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<223>   AMIDATION


<220>
<221>   UNSURE
<222>   (6)..(6)
<223>   Xaa can be any of the twenty naturally occurring amino acids


<400>   6

Trp Trp Pro Lys His Xaa
1                   5

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<212>   PRT
<213>   synthetic construct

<220>
<221>   MOD_RES
<222>   (4)..(4)
<223>   AMIDATION


<220>
<221>   UNSURE
<222>   (4)..(4)
<223>   Xaa is either Lys or Arg


<400>   7

Trp Trp Pro Xaa
1

<210>   8
<211>   6
<212>   PRT
<213>   synthetic construct

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<223>   AMIDATION


<220>
<221>   UNSURE
<222>   (6)..(6)
<223>   Xaa can be any one of the naturally occurring amino acids


<400>   8
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Tyr Pro Phe Gly Phe Xaa
1               5


<210>   9
<211>   7
<212>   PRT
<213>   synthetic construct

<220>
<221>   MOD_RES
<222>   (1)..(5)
<223>   Amino acids are in the D-form


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   n is 0 or 1


<220>
<221>   MOD_RES
<222>   (7)..(7)
<223>   Xaa is Gly or the D-form of a naturally occurring amino acid


<220>
<221>   MOD_RES
<222>   (7)..(7)
<223>   AMIDATION


<400>   9

Ile Met Ser Trp Trp Gly Xaa
1               5

<210>   10
<211>   6
<212>   PRT
<213>   synthetic construct

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<221>   MOD_RES
<222>   (1)..(4)
<223>   Amino acids are in the D-form


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   Xaa is Gly or the D-form of a naturally-occurring amino acid


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   AMIDATION


<400>   10
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Ile Met Thr Trp Gly Xaa
1                 5


<210>   11
<211>   4
<212>   PRT
<213>   synthetic construct

<220>
<221>   MOD_RES
<222>   (2)..(2)
<223>   Xaa is A1, wherein A1 is the D-form of Nve or Nle


<220>
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<222>   (3)..(3)
<223>   Xaa  is B2, wherein B2 is Gly, Phe, or Trp


<220>
<221>   MOD_RES
<222>   (4)..(4)
<223>   Xaa is C3, wherein C3 is Trp or Nap


<220>
<221>   MOD_RES
<222>   (4)..(4)
<223>   AMIDATION


<400>   11

Tyr Xaa Xaa Xaa
1


<210>   12
<211>   3
<212>   PRT
<213>   synthetic construct

<220>
<221>   MOD_RES
<222>   (1)..(1)
<223>   Tyr has at its N-terminus an Me-x-H-y-N group, wherein x is 0, 1,
        or 2; and y is 0, 1, or 2, with the proviso that x and y is neve
        r greater than


<220>
<221>   MOD_RES
<222>   (1)..(2)
<223>   The amine between the first Tyr and the second Tyr is methylated



<220>
<221>   MOD_RES
<222>   (3)..(3)
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```
<223>   Xaa is Xaa-z, wherein Xaa is Phe, (D)Phe, or NHBzl, and wherein z
        is 0 or


<220>
<221>   MOD_RES
<222>   (3)..(3)
<223>   AMIDATION


<400>   12

Tyr Tyr Xaa
1

<210>   13
<211>   6
<212>   PRT
<213>   synthetic construct


<220>
<221>   MOD_RES
<222>   (4)..(4)
<223>   Xaa is D4, wherein D4 is Lys or Arg


<220>
<221>   MOD_RES
<222>   (5)..(5)
<223>   His is His-z, wherein z is 0 or 1


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   Xaa is Xaa-z, wherein Xaa is a naturally occurring amino acid and
        z is 0 or


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   AMIDATION


<400>   13

Trp Trp Pro Xaa His Xaa
1                   5

<210>   14
<211>   4
<212>   PRT
<213>   synthetic construct


<220>
<221>   MOD_RES
<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid
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<400>  14

Tyr Xaa Phe Phe
1

<210>  15
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>  MOD_RES
<222>  (4)..(4)
<223>  AMIDATION


<400>  15

Tyr Xaa Phe Phe
1

<210>  16
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (1)..(1)
<223>  Tyr is Tyr(N-alpha-Me), i.e. N-alpha-methyltyrosine


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>  16

Tyr Xaa Phe Phe
1

<210>  17
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (1)..(1)
<223>  Tyr is Tyr(N-alpha-Cmp), i.e. N-alpha-cyclopropylmethyltyrosine


<220>
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<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>  17

Tyr Xaa Phe Phe
1

<210>  18
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (1)..(1)
<223>  Tyr is Tyr(N-alpha-Hex), i.e. N-alpha-hexyltyrosine


<220>
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<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>  18

Tyr Xaa Phe Phe
1

<210>  19
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
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<222>  (1)..(1)
<223>  Tyr is Tyr(N-alpha-Et2), i.e. N-alpha-diethyltyrosine


<220>
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<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>  19

Tyr Xaa Phe Phe
1

<210>  20
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
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<222>   (1)..(1)
<223>   Tyr is Dmt, i.e. 2,6-dimethyltyrosine


<220>
<221>   MOD_RES
<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>   20

Tyr Xaa Phe Phe
1

<210>   21
<211>   4
<212>   PRT
<213>   synthetic construct

<220>
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<222>   (1)..(1)
<223>   Tyr is Dmt, i.e. 2,6-dimethyltyrosine


<220>
<221>   MOD_RES
<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>   MOD_RES
<222>   (4)..(4)
<223>   AMIDATION


<400>   21

Tyr Xaa Phe Phe
1

<210>   22
<211>   4
<212>   PRT
<213>   synthetic construct

<220>
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<222>   (1)..(1)
<223>   Tyr is H-Tyr(3-F), i.e. 3-fluorotyrosine


<220>
<221>   MOD_RES
<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>   22
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Tyr Xaa Phe Phe
1

<210> 23
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<212> PRT
<213> synthetic construct

<220>
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<222> (1)..(1)
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<220>
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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<400> 23

Tyr Xaa Phe Phe
1

<210> 24
<211> 4
<212> PRT
<213> synthetic construct

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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<400> 24

Tyr Xaa Phe Phe
1

<210> 25
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<212> PRT
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<222> (1)..(1)
<223> Tyr is Dmt, i.e. 2,6-dimethyltyrosine

<220>
<221> MOD_RES

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<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
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<222>  (2)..(3)
<223>  nonpeptidyl bond


<400>  25

Tyr Xaa Phe Phe
1

<210>  26
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<212>  PRT
<213>  synthetic construct

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<222>  (1)..(1)
<223>  Tyr is Dmt, i.e. 2,6-dimethyltyrosine


<220>
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<222>  (2)..(3)
<223>  nonpeptidyl bond


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
<221>  MOD_RES
<222>  (4)..(4)
<223>  AMIDATION


<400>  26

Tyr Xaa Phe Phe
1

<210>  27
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n
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<220>
<221>  MOD_RES
<222>  (3)..(3)
<223>  Phe is -NCH3]Phe, i.e. N-methylphenylalanine


<400>  27

Tyr Xaa Phe Phe
1

<210>  28
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
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<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
<221>  MOD_RES
<222>  (3)..(3)
<223>  Phe is -NH]Hfe, i.e. homophenylalanine


<400>  28

Tyr Xaa Phe Phe
1

<210>  29
<211>  4
<212>  PRT
<213>  synthetic construct

<220>
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<222>  (1)..(1)
<223>  Tyr is Tyr(NMe), i.e. N-methyltyrosine


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
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<222>  (3)..(3)
<223>  Phe is -NH]Hfe, i.e. homophenylalanine


<400>  29
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12

Tyr Xaa Phe Phe
1

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<212>   PRT
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<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<220>
<221>   MOD_RES
<222>   (3)..(3)
<223>   Gly is Phg, i.e. phenylglycine

<400>   30

Tyr Xaa Gly Phe
1

<210>   31
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<212>   PRT
<213>   synthetic construct

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<222>   (2)..(2)
<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<400>   31

Tyr Xaa Trp Phe
1

<210>   32
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<223>   Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

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<223>   AMIDATION

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Tyr Xaa Trp Phe
1

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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<400> 33

Tyr Xaa His Phe
1

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<220>
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<223> Ala is 2-Nal, i.e. 3-(2'-naphthyl)alanine

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Tyr Xaa Ala Phe
1

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<220>
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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<220>
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<223> Xaa is Atc, i.e. 2-aminotetralin-2-carboxylic acid

<400> 35

Tyr Xaa Xaa Phe

14

1

<210> 36
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<220>
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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Phe is Phe(pNO2), i.e. 4-nitrophenylalanine

<400> 36

Tyr Xaa Phe Phe
1

<210> 37
<211> 4
<212> PRT
<213> synthetic construct

<220>
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<220>
<221> MOD_RES
<222> (4)..(4)
<223> Phe is Phe(pNO2), i.e. 4-nitrophenylalanine

<400> 37

Tyr Xaa Trp Phe
1

<210> 38
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<213> synthetic construct

<220>
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<223> Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

<220>
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<222> (4)..(4)
<223> AMIDATION

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<400>  38

Tyr Xaa Phe Trp
1


<210>  39
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<212>  PRT
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<220>
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<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>  MOD_RES
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<223>  AMIDATION


<400>  39

Tyr Xaa Phe Phe Val Val Gly
1               5


<210>  40
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<212>  PRT
<213>  synthetic construct


<220>
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<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
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<400>  40

Tyr Xaa Phe Phe Tyr Pro Ser
1               5


<210>  41
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<212>  PRT
<213>  synthetic construct


<220>
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<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid
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<220>
<221>  MOD_RES
<222>  (7)..(7)
<223>  AMIDATION


<400>  41

Tyr Xaa Trp Phe Tyr Pro Ser
1                   5

<210>  42
<211>  7
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>  MOD_RES
<222>  (4)..(4)
<223>  Phe is Phe(pNO2), i.e. 4-nitrophenylalanine


<220>
<221>  MOD_RES
<222>  (7)..(7)
<223>  AMIDATION


<400>  42

Tyr Xaa Trp Phe Tyr Pro Ser
1                   5

<210>  43
<211>  7
<212>  PRT
<213>  synthetic construct

<220>
<221>  MOD_RES
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<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>  MOD_RES
<222>  (6)..(6)
<223>  Nle


<220>
<221>  MOD_RES
<222>  (7)..(7)
<223>  AMIDATION
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<400>  43

Tyr Xaa Phe Phe Leu Leu Asp
1               5


<210>  44
<211>  3
<212>  PRT
<213>  synthetic construct


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<400>  44

Tyr Xaa Phe
1


<210>  45
<211>  3
<212>  PRT
<213>  synthetic construct


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic, i.e. 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid


<220>
<221>  MOD_RES
<222>  (3)..(3)
<223>  AMIDATION


<400>  45

Tyr Xaa Phe
1


<210>  46
<211>  3
<212>  PRT
<213>  synthetic construct


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
<221>  MOD_RES
<222>  (2)..(3)
<223>  nonpeptidyl bond
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<400>  46

Tyr Xaa Phe
1


<210>  47
<211>  4
<212>  PRT
<213>  synthetic construct


<220>
<221>  MOD_RES
<222>  (2)..(2)
<223>  Xaa is Tic-psi-[CH2-], i.e. 3-methyl-1,2,3,4-tetrahydroisoquinoli
       n


<220>
<221>  MOD_RES
<222>  (2)..(3)
<223>  nonpeptidyl bond


<400>  47

Tyr Xaa Phe Phe
1


<210>  48
<211>  5
<212>  PRT
<213>  synthetic construct


<400>  48

Tyr Gly Gly Phe Met
1               5


<210>  49
<211>  6
<212>  PRT
<213>  synthetic construct


<400>  49

Tyr Gly Gly Phe Met Lys
1               5


<210>  50
<211>  6
<212>  PRT
<213>  synthetic construct


<400>  50

Tyr Gly Gly Phe Leu Lys
1               5


<210>  51
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<211>   6
<212>   PRT
<213>   synthetic construct  .

<220>
<221>   MOD_RES
<222>   (1)..(1)
<223>   NH2 of Tyr is blocked by butyloxycarbonyl group


<400>   51

Tyr Gly Gly Phe Leu Lys
1               5


<210>   52
<211>   6
<212>   PRT
<213>   synthetic construct

<220>
<221>   MOD_RES
<222>   (1)..(1)
<223>   NH2 of Tyr is blocked by butyloxycarbonyl group


<220>
<221>   MOD_RES
<222>   (6)..(6)
<223>   polymer connected to epsilon-amino group


<400>   52

Tyr Gly Gly Phe Leu Lys
1               5
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